	Application No.	Applicant(s)
Notice of Allowability	10/092,375	KIM ET AL.
	Examiner	Art Unit	
	Tung Vo	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed 05/16/06.*

2. ☒ The allowed claim(s) is/are *1-2, 4-11, 13-30, and 32 allowed. Which were renumbered as 1-29, respectively.*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the

         International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

      Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

1.   Note claims 3, 12, and 31 have been cancelled by the amendment.

2.   Claims 1-2, 4-11, 13-30, and 32 are pending.

Allowable Subject Matter

1.   Claims 1-2, 4-11, 13-30, and 32 allowed. Which were renumbered as 1-29, respectively.

2.   The following is an examiner's statement of reasons for allowance:

The prior of records does not teach or suggest a method of performing adaptive intra refresh, the method comprising: receiving a packet loss probability value; receiving a motion vector for a first macroblock in a first frame; mapping the motion vector onto portions of a plurality of other macroblocks in a previous frame; calculating at least a first transition factor value based at least in part on the mapping; calculating an estimated inter distortion value for the first macroblock based on at least the packet loss probability value and the first transition factor value; calculating an estimated intra distortion value for the first macroblock based on at least squared initial error energy value multiplied by the packet loss probability value; receiving a first bit quantity value corresponding to a bit quantity used to intacode the first macroblock; receiving a second bit quantity value corresponding to a bit quantity used to intercode the first macroblock; and determining a first difference value based on a difference between the estimated intra distortion value and the estimated inter distortion values and a second difference value based on a difference between the first bit quantity value and the second bit quantity value; based at least

in part, on the first difference value and the second difference value, transmitting the first

macroblock as one of an intra macroblock and an inter macroblock as specified in claim 1.

The prior of records does not teach or suggest a method of selectively intracoding

macroblocks, the method comprising: receiving a packet loss probability value; receiving a

motion vector for a first macroblock in a first frame; based at least in part on the motion vector,

determining which portions of macroblocks in a previous frame would be used in predicting the

first macroblock; calculating at least a first propagation strength value based at least in part on

determining which portions of macroblocks in the previous frame would be used in predicting

the first macroblock; calculating an estimated inter distortion value for the first macroblock

based on at least the packet loss probability value and the first propagation strength value;

calculating an estimated intra distortion value for the first macroblock based on at least the

packet loss probability value; calculating a quantization distortion value for the first macroblock;

receiving a first bit quantity value corresponding to a bit quantity used to intracode the first

macroblock; receiving a second bit quantity value corresponding to a bit quantity used to

intercode the first macroblock; and based at least in part on a difference between the estimated

inter distortion value and the estimated intra distortion value, the quantization distortion value,

and a difference between the first bit quantity value and the second bit quantity value, providing

for transmission the first macroblock as one of an intra macroblock and an inter macroblock as

specified in claims 18 and 24.

The prior of records does not teach or suggest a method of selectively intracoding

macroblocks in a plurality of macroblocks in a first frame, the method comprising: receiving a

packet loss probability value; receiving a corresponding motion vector for each macroblock in

the plurality of macroblocks; based at least in part on the corresponding motion vector,

determining which portions of macroblocks in a previous frame would be used in predicting said

each macroblock; calculating for each of said macroblocks at least a first corresponding

propagation strength value based at least in part on said portions of macroblocks in the previous

frame determined to be used in predicting said each macroblock; calculating for each of said

macroblocks an estimated inter distortion value based upon at least the packet loss probability

value and the corresponding at least first propagation strength value; calculating for each of said

macroblocks an estimated intra distortion value based upon at least the packet loss probability

value; calculating for each of said macroblocks a quantization distortion value; and based at least

in part on the quantization distortion values for each macroblock in the plurality of macroblocks

and a difference between the estimated inter distortion and the estimated intra distortion,

designating a subset of the plurality of macroblocks to be intracoded as specified in claim 27.

It is noted that the applicant arguments as set forth in the amendment filed 05/16/2006 are
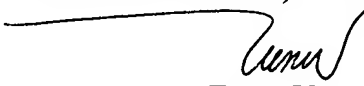
persuasive.

Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

3.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The

examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tung Vo
Primary Examiner
Art Unit 2621